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ABSTRACT

Three learning situations found in the cooperative program, namely vocational or technical course work, training stations, and the related class, are described and pertinent curriculum materials are reviewed. In addition to content, the reviewer examines quality and usefulness, validity, enrichment materials and instructional aids, and student involvement and participation, according to criteria which he sets forth in the document. Seven documents designed for a variety of occupational areas, five documents designed for use in a single occupational or vocational field, and 12 periodicals are reviewed. (GEB)

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review and analysis of instructional materials for

COOPERATIVE VOCATIONAL EDUCATION

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Clearinghouse on
Vocational and
Technical Education

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preface

The growing acceptance of cooperative education programs demands that educators be aware of developments within the field.

In this *Review and Analysis of Instructional Materials for Cooperative Education,* the author briefly describes three distinct learning situations in the cooperative program. He then reviews curriculum materials for teacher and student use. The contents of materials are examined for validity, enrichment components, and instructional aids. An evaluation is given of their contribution to student involvement and participation. In conclusion, the author reviews selected periodicals relating to curriculum materials.

The profession is indebted to Harold R. Wallace, Utah State University, for his scholarship in the preparation of this report. Recognition is also due Peter G. Haines, Michigan State University, and Ronald Meek, Oklahoma State Department of Vocational and Technical Education, for their critical review of the manuscript prior to final revision and publication. Wesley E. Budke, information specialist at The Center, coordinated the publication's development.

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REVIEW AND ANALYSIS OF INSTRUCTIONAL MATERIALS FOR COOPERATIVE VOCATIONAL EDUCATION

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introduction

An important trend in education during the sixties has been increasing acceptance and rapid expansion of the cooperative plan of instruction, especially in those occupational fields which traditionally use other methods. Teacher education programs are not keeping pace with the demand for trained teacher-coordinators, and many of the new positions are being filled by regular vocational teachers. Often the assignment is given on short notice. Frequently the new teacher-coordinator has the challenge of initiating and developing a program "from scratch" without the benefit of other established programs in the school to serve as models. He needs help as he attempts to comprehend and visualize how a good cooperative program works and what it can do to bring realism and vitality to education. He needs help in determining what to teach and how to find or develop instructional resources and activities. He needs help in learning how to establish and manage his program, and usually the need is for now, prepackaged and instantly usable.

This document is oriented to one specific aspect of the cooperative program—the related instruction of content and learning resource materials. It is designed to assist the novice coordinator in his search for something with which to get his show on the road. Also, it may help him to view his related instruction in a realistic perspective and set the stage for him to search out and develop instructional materials and ideas for increasing the effectiveness and relevance of this critical phase of his program. Also, it may provide some suggestions and activity targets for those engaged in curriculum and instructional resources development for cooperative programs.

The term, related instruction, has a special meaning in cooperative vocational education. To fully understand what the term means it is necessary to have a comprehensive acquaintance with how a cooperative program operates. An overview of the basic structure of a cooperative program is presented in a following section, along with a discussion of the needs of cooperative student-learners, toward which related instruction should be directed.

Briefly defined, the related instruction in a cooperative vocational education program consists of the common learnings which are taught as part of a regularly scheduled class or laboratory in the school. Although students usually have a variety of career interests, only a portion of the formal instruction is devoted to subject matter of common interest and value for all proposed occupations. The learning content of the common learnings portion of a related class or laboratory is the primary focus of this review and analysis of instructional materials.

the search for documents

Three computer searches were used to identify potentially applicable documents. One covered the materials found in *Research in Education* (RIE), a comprehensive collection of research documents; another covered *Abstracts of Instructional Materials in Vocational and Technical Education* (AIM). The third was a search for periodical articles in the recently established *Current Index to Journals in Education* (CIJE). Because the CIJE document search did not produce information regarding the bulk of periodical literature which is available, a number of periodicals were screened for pertinent articles—the *American Vocational Journal,* the *Vocational Guidance Quarterly, Business Education Index,* and several journals concerned with specific fields of vocational education. The articles dealing directly with the related instruction aspect of cooperative programs were identified and carefully studied. Some articles were omitted from the review because even though they mentioned general related instruction, they did not devote any major attention to it.

This document search extended back to 1965. However, the reader who might be interested in articles dealing with the pioneer efforts in cooperative program curriculum design, which set patterns for what is found in current practice, would need to search the literature of the forties and even earlier. The purpose of this paper is to review and critique currently available instructional materials and, therefore, a review and synthesis of literature dealing with theory and development of basic concepts, was not undertaken.

the cooperative plan

Cooperative vocational education programs appear in a variety of forms, according to the requirements and conditions found in the various occupational fields in which they operate. All share a fundamental approach to education and training, that of blending learning experiences in a formal education setting with learning activities in an actual employment situation assuming that the two coordinated sets of learning experiences will be mutually reinforcing and enriching.

The cooperative plan of instruction places the learner in several distinct learning situations, including an on-the-job training station, regular vocational or technical courses in school, a specially designed class or laboratory which serves as a focus for coordination and management of the program, and "co-curricular" activities which usually include a student organization patterned after trade or professional associations. Following are brief explanations of the roles and functions of these components of a fully developed cooperative program. It should be noted that the following information is essentially consistent with what leading vocational-technical educators are advocating in their writings about the cooperative plan. However, there is often a gap between the ideal and what is found in practical

application. The reader who has observed typical cooperative programs in operation will know that the program characteristics described below emerge only after several years of effective development by a competent, dedicated teacher-coordinator having adequate support from school administrators and the business community. The philosophical undergirding of this review and analysis paper includes a concept of the related class as it should appear in the context of the following description of a cooperative program.

Vocational or Technical Course Work

The objective of this component of the program is to provide formal instruction, application, and skill development in the core learnings of the occupational family and in specific job related learnings. This may be taught in the related class or in separate courses such as welding, upholstery, office machines, ornamental horticulture, or salesmanship. Usually the instructional setting is in a laboratory or specially equipped classroom. Ideally, the teacher-coordinator is responsible for this phase of the program, but frequently these specific courses are taught by instructors who have no direct involvement in the cooperative program.

Training Stations

A logical way of enhancing the learning value of vocational or technical course work is to place the student in a related part-time job. The student then finds added meaning in his school activities and has the advantage of being able to apply some of his learning in the employment situation. However, unless the employer accepts substantial responsibility for cooperating with the school in a coordinated effort to train the student, sharing as a partner in the educational enterprise, the program does not conform with the basic concept of the cooperative plan (Mason and Haines, 1965, Chapters 4 and 5).

In an ideal application of the cooperative plan an employment supervisor accepts the role of training sponsor for the student. He assists the student in work adjustment and specific job related instruction. A training plan is developed, outlining a sequence of learning experiences and rotating job assignments to provide for continuous progress in learning the specific job and preparing for future job advancement and career development. In effect, each training sponsor is an assistant instructor with responsibility for a one-student employment laboratory.

The Related Class

In a typical cooperative program the related class is used as a base of operations for coordinating vocational and technical course work with on-the-job learnings, as a class and laboratory to provide general related instruction, as a learning center for individual job learnings, and as an administrative vehicle for co-curricular activities.

As an administrative vehicle for co-curricular activities, the related class provides the time, the place, and the resources for participation in

organized club activities, special learning projects, remedial learnings in academic subjects, career counseling and exploration, and assistance with personal, social and occupational adjustment.

As a learning center for individual job learnings, the related class provides for individual or small group activities oriented to a specific job or occupational cluster. Usually the subject matter is based on, or integrated with, the job related instruction specified in student training plans. From the student learner's point of view, the activities of the training station are blended with the individual job learnings in the related class to form a meaningful unity of purpose and activity.

scope and focus of this review

From the above description of the related class the reader will see that this review and analysis project focuses on the learning content and instructional materials for only one component of the related class, the common learnings relevant for all students and which are not specifically related to the technical job learnings of individual students. Mason and Haines refer to this component of the related class as "basic related instruction" (1965: 93). They use the term, "specific related instruction" to designate the learnings concerned with the individual and his training station.

A more recent concept of related instruction is presented in *A Guide for Cooperative Vocational Education* (University of Minnesota, 1969) based on points of view and opinions developed at a national conference on cooperative education. In a section titled "Providing Related Instruction," three pertinent "vocational capability areas" are described as follows (p. 46):

> The vocational capabilities to be learned may be classified as (1) Specific skills which are derived from an occupation, (2) Occupational adjustment capabilities which are needed to succeed in a work environment, and (3) Career development capabilities which are concerned with helping the learner find a satisfying occupational role.

needed resource materials

To provide the new teacher-coordinator with the complete "prepackaged and instantly usable" material for developing an effective cooperative program would require at least three major items. It seems appropriate to list and briefly describe them here so that the reader may visualize how this paper contributes to the total package and to show what else is needed.

Instructional Content Materials and Teaching Suggestions for the Common Learnings in the Related Class

Materials in this area are the primary focus of this project. As the following chapters will show, several such projects will be required to

adequately cover the fields of study which a teacher-coordinator might want to approach in his related class. The scope of this review is limited essentially to one area, occupational adjustment. The goal is to assist students in preparing to cope with the many personal and interpersonal challenges of adapting to the new and often bewildering work environment. Another important related instruction goal, that of assisting students in their career development—finding and preparing for a satisfying career—should be the focus of another review and analysis, although it receives some attention here.

There are several other areas of study which are sometimes included as related instruction in cooperative programs. The following chapters identify these areas of study and comment on what the related class is in many current successful programs along with some opinions on what it should be.

Guidelines for Development and Operations of a Cooperative Program

For most program types this material is available in good, usable form. Twenty such documents were found in a *Review and Synthesis of Research in Cooperative Vocational Education* (Wallace, 1970: 83-85, 110-111). Some are oriented to specific student groups, but most are designed for a specific occupational field. Typically, these documents are produced and distributed by state departments of education.

Instructional Content Materials for Specific Occupational Group Learnings

Literally hundreds of these documents are found in the ERIC collection. Some are listed in the above mentioned Review (Wallace, 1970: 100-105). Each issue of AIM (*Abstracts of Instructional Materials for Vocational and Technical Education,* 1967—) includes abstracts of many newly published items. Review and analysis papers have been completed in the areas of public service (Lewis, 1970) and metalworking (Snyder and Butler, 1970). Others are in process; many are needed in order that the new coordinator can easily find and appraise the value of instructional materials for use in providing for individual job learnings in the related class and in the courses designed for specific occupational instruction.

how the materials were evaluated

In addition to presenting a review of the content of each document, some attention is given to its quality and usefulness. To say that one item is good and another not so good presupposes that the critic is applying a set of appropriate evaluative criteria. The criteria applied in this review are justified only on the basis of the reviewer's personal judgment regarding what "good" curriculum materials should be. Three specific quality factors which were considered in the reviews are explained below.

Validity of Content

A basic concept of curriculum development is the notion that instructional objectives and content should be derived from an appraisal of the present and future demands made upon the student learner. Achievement of the objectives should enable him to succeed in more advanced study in school or on his training station, perform effectively as required on his training station or in future employment, achieve satisfactory work adjustment, and progress toward choosing and planning for a satisfying career. A fundamental assumption is that the teacher-coordinator should be concerned about the validity of his instructional objectives, and that evidence of validity should relate to what students actually need to know, what they need to be able to do, or what personal characteristics they need to develop in the four areas of achievement identified above.

Therefore, the process by which the curriculum content and objectives were determined was considered important as a qualitative factor. Ideally, we would hope to see careful occupational and task analysis investigations as the first step in deriving information about what students should learn in the specific occupational instruction and individual job learnings phase of the related class. The general related or common learnings content should be determined by an analysis and synthesis of all the occupational and task analysis data across the various occupational fields. These procedures have been applied to the development of curricula for training in specific occupational clusters (Wallace, 1970: 41-52), but none of the specific items included in this review employed these rigorous techniques to insure the validity of instructional content. Too often there was no apparent concern about the validity of curricular content. In this review, any effort to insure appropriateness of content was considered as a positive quality factor.

Enrichment Materials and Instructional Aids

Here it is assumed that curriculum materials should not simply consist of the bare bones of a content outline or a narrative presenting sterile textbookish content material. Therefore, one might hope to find instructional helps, suggestions regarding teaching techniques and procedures, pertinent reference lists, examinations, and other resources to make the instructional package interesting for students and readily usable by the teacher-coordinator.

Student Involvement and Participation

It is axiomatic that students learn more, learn it more thoroughly, and find the learning experience to be rewarding if they are actively involved and participating in meaningful ways. The learning process is assumed to include some formal presentation followed by interesting, relevant illustrations or practical applications, and culminated with the opportunity to use what is learned or to develop the skill in a realistic situation.

Those materials which assumed essentially a "read and regurgitate" approach, offering the instructor no suggestions for insuring student inter-

est, involvement or application, were considered to be inferior in this review and evaluation.

reviews of the materials

The documents reviewed below are identified by the name of the sponsoring agency. Additional pertinent information is found in the bibliography. The first group is entirely concerned with related instruction and the second group is designed for a cluster of occupations and includes specific occupational instruction along with some related learnings.

For convenience in identifying the following documents for an analysis of curriculum content, each item is numbered.

For General Use

The materials reviewed below are designed for use in a variety of occupational areas and not for a single occupation or vocational field.

1. Sponsor: Missouri State Department of Education
   Title: *General Related Study Guide—A Course of Study Designed for Students Enrolled in Cooperative Part-time Vocational Education*

This document appeared three times in the computer search, twice as a publication of the Missouri State Department of Education (Brown, 1965a; Horine, 1965a), with different personal authors each time and once as a publication of Purdue University (1965). There are some minor differences in the documents but only the kinds of changes which came about as the document was adapted to the needs of another state. An instructor's manual (Brown, 1965b; Horine, 1965b) is also published as a separate document. By referring to the references in the bibliography, the reader will be able to choose which source will be most appropriate for his own purposes.

The material was developed by a statewide committee of coordinators and teacher-educators and field tested and revised periodically since its first version in 1944. Horine says, "An earnest attempt has been made to incorporate the suggestions of an advisory group of coordinators and local directors." The content consists of 17 assignment sheets and eight information sheets. Each assignment sheet is keyed to one or more references and provides study questions. The information sheets provide background information not found in the references. The assignment topics are: "The Cooperative Occupational Education Program," "Effective Study Habits," "Working with Others," "Employer-Employee Relation," "Budgeting Your Income," "Saving and Investing," "Credit and Money Management," "Contracts," "Legal Regulations for Young Workers," "Labor Unions," "Planning Your Career," and "Changir g Jobs."

The instructional approach is to have the student complete assigned readings and then test him on the material. The main assigned readings are

not included in the document and appear from a variety of sources. Some units which do not require outside reading are obviously taken verbatim from selected books. The coordinator's manual (Brown, 1965b; Horine, 1965b) provides detailed lesson plans. It incorporates many worthwhile suggestions for the teacher in providing for enrichment and student involvement. The fact that this material has been in use over a period of years and has been subjected to many revisions would suggest that it is widely used and the overall impression of this reviewer is that this material provides a good useful package for the coordinator who chooses to accept the subject matter which is offered in this package.

2. Sponsor: North Carolina State Department of Public Instruction
   Title: *The General Related Units for Industrial Cooperative Training; A Suggested Study of Topics Needed by Every Vocational Student*

This instructional package includes two separate documents—a textbook for student use and an instructor's guide (Smith, 1965a and b). The student textbook exceeds 300 pages and consists of material written directly to the student. The end-of-unit activities are rather sterile and unimaginative. For example, at the end of the unit on Study Habits, the student is asked to "name six important study conditions, name six important ways to study, name 17 ways of studying for an examination." The development of this material is not described in detail but apparently cooperative program coordinators in industrial education worked closely with an editor who provided leadership in gathering the material and putting it under one cover. The content objective "is to promote personal and vocational adjustment on the part of the student." The major units include: "Orientation," "Employment," "How to Study," "Duties and Responsibilities of the Worker," "Agencies Affecting Employment," "Safety," "First Aid," "Personality," "Human Relations," "Citizenship," "Communication Skills," "Government Services," "Applied Mathematics," and "Science." Under each major topic is a lengthy list of subtopics and the total topic outline is by far the most extensive and comprehensive to be found in this review. The question of appropriateness of content is discussed in the final chapter. At this point, it is sufficient to note that this material comprehends a very wide array of subjects which are very likely to be taught in other parts of the school curriculum.

The teacher's guide contains a very extensive and apparently very useful bibliography. It lists many references and resource materials on the various topics which are included on the outline. There is a seven page listing of books and pamphlets and a five page listing of 16mm films which might be pertinent.

While the usefulness of the material is limited because of its sterility in terms of enrichment ideas and suggestions for the teacher, it does afford the considerable advantage of providing the imaginative teacher-coordinator with raw material for developing instructional ideas and materials on a wide array of subjects.

3. Sponsor: Ohio State Department of Education
Title: *A Study Guide for Occupational Work Experience Students*

This is a two-semester course in two separate documents (1969a and b). It was developed by teachers and teacher-educators for disadvantaged occupational work experience students. The topical content, first semester, includes: "Orientation," "How to Apply and Get the Job," "Job Safety," "Personal Budgeting," "Why Stay in School?" "How to Study," "What the Employer Wants," "Minor Labor Regulations," "Labor Unions," "Management and Labor Relations," "Personal Hygiene," and "Personality." The second semester units include: "Income Tax," "Government and You," "Social Security," "Workmen's Compensation," "Personal Qualities," "Alcohol," "Insurance," "Narcotics," "Smoking," "Buying an Automobile," and "Juvenile Delinquency."

The authors of this material appear to have been unusually concerned about orienting the material to the level of interest and academic ability of the students. The content and writing style appear to speak the language of, and relate to, the needs of students who are not highly motivated towards school and who are perhaps somewhat low in academic achievement. The material is written entirely for individual student study.

The validity of the content rests on the assumption that experienced coordinators know what students need to learn. It also assumes that teacher-coordinators are capable of developing material which a student can use for individual study. This material could assist the development of participation experiences to supplement those which are already included. The learning activities suggested in the material appear to be mainly of the "read and regurgitate" types. However, the content material is readily adaptable for use by an imaginative teacher in developing more appropriate learning activities.

4. Sponsor: Santa Barbara High School District, California
Title: *Preparation for Employment*

This is a 58 page booklet (1969) which is designed to explain the work education program of the high school to students and to furnish them with information on finding employment. The material appears to be quite well written and might be useful to teachers who want something which students can readily use. The main substance of the material involves reading and writing activities with checklists of things to remember and do. It was apparently developed by in-service teachers who used their own judgment and intuition about the needs and concerns of students preparing for employment. In contrast to the documents previously reviewed, this one is quite limited in scope and content and does not pretend to cover all the appropriate material for related instruction in a cooperative program. Some of the topics include: "Social Security Laws," "Federal and State Child Labor Laws," "Personality Surveys," "Types of Beginning Jobs Available," "Learning About Application Forms," "Grooming and Appearance," "The Interview," "What the Employer May Expect," "What the Employee May Expect," and "How to Keep the Job." Included in the appendix are some sample letters of job applications and question sheets for students.

5. Sponsor: The University of Texas
   Title: *Student's Personal Adjustment to Work, Suggested Plans for Group Discussions in Vocational-Technical Education*

This material was developed by a teacher-coordinator and an advisory committee. It is designed as a study guide and as a plan for developing discussion topics relative to job orientation (Parr, 1963b). Some of the topics are: "Personal Traits," "Money and Banking," "School Relations," "Civil Responsibilities," "Records and Reports," "Applying and Interviewing for Jobs," "Facts about Narcotics," and "Public Relations." Lesson materials for each topic include references and instructional procedures and suggestions regarding group participation. The bibliography lists books, booklets, pamphlets, and films. A companion document which is listed as Volume I (Parr, 1963a) was not available for this review. Apparently it contains the content material and should be used along with the teacher's guide.

6. Sponsor: University of Minnesota
   Title: *Coordinator's Guide for Occupational Relations*

This is a package including a coordinator's manual and a student guide (Meyer, 1960). These documents are mentioned here as they represent a very early effort of high quality which has resulted in very wide use of the material. No formal attempt was made to validate the topical content, except by reliance on the judgment of the project director, Warren G. Meyer. His work in the development of instructional materials for cooperative vocational programs, particularly for distributive education, is well known and highly respected in the vocational education community.

The topical content includes: "Orientation to the Program," "Selecting and Applying for Employment," "Personality and Job Success," "How to Learn a Job," "Employer-Employee Relations," "Co-Worker Relations," "Progress on the Job," "Money Management," "Taxes," "Social Security," "Workers and Unions," "Legal Problems of the Worker," "Insurance," "Understanding Business Management," and "Choosing and Planning a Career."

The material for the student is very well illustrated and includes much enrichment material. The coordinator's guide is superior to any of the documents reviewed here in providing suggestions for interesting learning activities, methods of teaching, and related reference materials.

7. Sponsor: Michigan Department of Education
   Title: *Applying the Cooperative Plan of Instruction to Manpower Programs*

This document (Haines, et al., 1970) is a comprehensive set of guidelines for developing and operating a cooperative vocational program within the framework and specifications of the Manpower Development and Training Act of 1962. Six pages are devoted to a discussion of the function of related instruction. These include a list of suggested topics or "knowledges" to be mastered before employment and a list of topics to be covered in the related class after the student is placed at a training station. There is no evidence that the topics were derived on the basis of occupational anal-

ysis or other research procedures. Some of the suggested topics include: "Job Interviewing," "Employment Benefits," "What an Employer Looks for in an Employee," "Grooming," "Basic Human Relations," and an assortment of consumer education topics such as "Budgeting," "Installment Buying," "Insurance," and the like.

For Use in a Specific Occupational Field

The materials reviewed below are designed for use in a single occupation or vocational field and not for a wide range of occupational areas.

1. Sponsor: Arizona State Department of Vocational Education
   Title: *Suggested Curriculum Guide for Cooperative Office Education*

This is an instructional program designed for cooperative office education (1968). It includes units in the critical areas of filing, data processing, and clerical skills. About half of the program is concerned with general instruction including such topics as: "Preparation for the Job Interview and Application," "Human Relations," "Communications," "Financial Responsibility," and "In-School Instruction Related to the Job."

The main substance of this material is a lesson plan with three columns, one for content subject matter, a second which includes suggested classroom activities, and a third which outlines related materials which might be used. References and some of the related materials are also included in the text. Instructional objectives and evaluation procedures are included for each unit. Apparently this material was written by teachers or consultants and its usefulness is limited by the teacher's ability to develop the substance of the lesson outlines. The material is quite barren of enrichment materials leaving much to the teacher's initiative.

2. Sponsor: The Center for Vocational and Technical Education, The Ohio State University
   Title: *Course Outline for Agricultural Supply-Sales and Service Occupations*

This document (Becker and Linter, 1965) presents operational details of a course designed to assist state and local vocational education leaders in developing programs to prepare high school students for entry and advancement in businesses which sell agricultural supplies and services to farmers. It was developed by a national task force on the basis of data from state studies as part of an Office of Education funded project. Some of the instructional modules include: "Career Opportunities in Sales," "Orientation to Occupational Experience," and "Human Relations," as well as units of instruction in the specific subject matter of agricultural sales and supply business procedures.

This material is well written, contains good enrichment and application ideas, and would be very usable for the teacher-coordinator in an off-farm cooperative program. It is limited in that its scope relating to subject matter only touches on some of the important topics which should be included in the general related instruction for a cooperative program.

3. Sponsor: Florida State Department of Education
   Title: *A Guide—Cooperative Business Education in Florida High Schools*

This document (1965) combines the guidelines for organizing and operating a cooperative vocational program in business education with a section on the curriculum content for such a program. The document gives no indication about how it was developed nor does it attempt to validate its content. The section on "Related Study" includes units on orientation, appearance, health, grooming, dress, communication, social and business etiquette, and parliamentary procedures. Each instructional unit outline gives objectives, materials and supplies which are needed, suggested course content in the form of a topic list, and selected text materials for library study. Some brief tips on methods and learning activities are included. The main value of the material would be to give the coordinator some guidelines in developing his own instructional materials for student use and for teaching and learning activities. The list of references is the most valuable part of this document.

4. Sponsor: Louisiana State Department of Education
   Title: *Coordinator's Handbook, Cooperative Office Education*

This handbook is designed primarily as a set of guidelines for development and operation of a cooperative office education program. It contains a section which is devoted to "facilitating the students' transition from school to work." The material is well illustrated with charts and drawings suitable for reproduction as transparencies and contains some good suggestions about teaching methods.

5. Sponsor: Missouri State Department of Education
   Title: *Management Individual Study, A Course of Study Designed for Students Preparing for or Presently Employed in Distributive Occupations*

This is a self-study workbook (Karnes, 1967), designed for distributive education students. It is pertinent for this review as one major section is concerned with "development of essential personal-social traits." The assignment sheets and related learning activities were designed by graduate students in a curriculum construction course, and the preparation of the final document was the responsibility of the staff of the curriculum materials laboratory at the University of Missouri.

The main learning activities are: true-false quiz questions, topical listing, and others. Very few suggestions for meaningful learning activities are offered for the teacher-coordinator.

6. Sponsor: Texas A & M University
   Title: *Group Instruction Handbook for Vocational Agriculture Teachers*

Although vocational agriculture does not fit within the usual definition of cooperative vocational education, this document (Kennedy, n.d.) represents an outstanding effort to produce instructional materials for related

instruction in a cooperative program in agriculture, and for traditional production agriculture programs as well.

Detailed lesson plans and supplementary materials are included for units of instruction in the following areas: careers in agriculture, FFA leadership, getting a job, human relations and personality development, scholarship and schools, personal traits, health habits, business organizations and procedures, and agricultural salesmanship.

Information sheets are provided as a means of assisting the teacher in learning the content to be taught. Reference materials and unit tests are also included.

topical content analysis

An interesting product of this investigation is the opportunity to tabulate the frequency of occurrence of various topics in the related instruction materials found in the ERIC collection. If the reader is inclined to assume that the content of his own class should conform to that which others have selected, the information in Table I will be useful. It may be that the most popular topics are the most important. Without substantial research evidence to indicate what should be taught, and with the realization that prepackaged instructional materials are more likely to be available for the most popular subject matter, it is difficult to find fault with the teacher-coordinator who gets on the bandwagon.

TABLE I
TOPICAL CONTENT OF VARIOUS CURRICULUM DOCUMENTS*

TOPICS	DOCUMENT IDENTIFICATION NUMBERS												
	General							Occupation Related					
	1	2	3	4	5	6	7	1	2	3	4	5	
I. *Work Adjustment*													
Orientation to Cooperative	x	x	x			x		x	x	x		x	
Worker Responsibilities and Employer Expectations	x	x	x	x		x	x			x		x	
Labor-management Relations, Unions, etc.	x	x	x	x		x	x				x	x	
Legal Regulations Concerning Young Workers			x	x									
Human Relations	x	x	x			x	x	x	x			x	
Personality Development		x	x	x	x	x	x					x	
Hygiene and Grooming		x	x	x			x					x	
How to Keep a Job				x			x					x	
Job Safety		x	x									x	
Agencies Affecting Employment		x					x					x	
Records and Reports						x							
Public Relations					x								
How to Learn a Job						x	x					x	
Understanding Business Management						x						x	
II. *Career Development*													
Career Planning	x			x		x	x			x		x	
Job Opportunities	x			x					x	x		x	
Securing a Job		x	x	x	x	x	x			x		x	
Why Stay in School			x									x	
Changing Jobs	x												
Progress on the Job						x							
III. *Personal Adjustment*													
How to Study	x	x	x										
Citizenship and Government		x	x	x	x		x					x	
Narcotics			x		x								
Smoking			x										
Alcohol			x										
Juvenile Delinquency			x										
IV. *Basic Academic Skills*													
Applied Math and Science		x											
V. *Consumer Economics*													
Personal Money Management	x	x	x		x	x	x		x				
Insurance and Social Security	x	x	x	x		x	x						
Taxes	x		x	x		x	x						
Business and Consumer Law	x					x							
Buying a Car			x				x						

* Each document was identified with a number in the previous section. To identify a specific document, the reader should refer to the previous section of this report.

selecting appropriate content

On the basis of the information produced in this search of the ERIC collection, no clear and definite pattern appears to suggest as a model for teaching occupational adjustment and career development in cooperative vocational programs.

The Ideal Approach

In an ideal situation each individual teacher-coordinator should have the time and resources to conduct a complete occupational analysis relating to the various occupations in which his students might find immediate and future employment. This information would be used to determine the demands made upon successful workers in those careers. A companion study should provide an analysis of the required personal characteristics such as levels of achievement in the critical subject areas, student concerns, expectations, aspirations, and self-concepts. Also, a study of employers' concerns and expectations and the work environment of the individual training stations would produce pertinent information. Obviously if the teacher-coordinator had to go through formal investigations to gather all this information, synthesize and interpret it, and translate it into an outline of related class content, the class would be over before he could begin teaching.

Current Practice

In a typical situation, the kind of research data described in the above paragraph is gradually accumulated on a rather informal and intuitive basis by each coordinator as he works to develop his program. After a few years experience, most coordinators are able to talk intelligently about the occupational demands, student characteristics, and the nature of the training station environment. The point is that the quality of instruction in the related class for any cooperative program will be enhanced according to the ability of the coordinator to bring relevant information to bear as he designs and develops that aspect of his program. It would be a mistake for the coordinator to assume that his students are like all other students, his training sponsors are like all other training sponsors, and that he is justified in using the copy, cut and paste approach, to develop the instructional content for his individual program.

Using Existing Research

The above observations do not mean that no specific information is available concerning what every student should learn to facilitate his occupational adjustment in a cooperative program. While a review of the pertinent research is not within the scope of this presentation, it is clear that much research evidence is available to show that work adjustment problems are more of a barrier to success than is failure to master technical knowledge and skills required on the job.

For example, an investigation of 300 Los Angeles office positions held by persons 16-24 years old (Erickson, 1971) identified 10 "basic components which could be considered basic to most beginning and intermediate office work." The component which appeared at the top of the list, occurring more frequently than any of the others, was "Communicating with Others." Some of the "elements" identified with this component were pleasant personality, tact, courtesy, the ability to remain calm, the ability to record and communicate meaningful messages (e.g., from a customer to a supervisor), explaining procedures clearly, the ability to cope with pressures of simultaneous tasks and contacts, the ability to cope with verbal abuse and to calm difficult persons, exercise of good judgment, and discretion. Obviously, these abilities and characteristics are mainly related to occupational adjustment and provide important clues for the teacher-coordinator of an office education cooperative program for young office workers.

Gail Benson (1972) identified 21 articles in a brief library search for information concerning personal characteristics necessary for effective performance in office jobs. Some of the characteristics which appeared frequently were good appearance, dependability, courtesy, cooperativeness, poise, loyalty, enthusiasm, neatness of work, ability to follow directions, well organized, tactful, industrious, prompt, and pleasant. Again, the relevance for occupational adjustment learning content is obvious.

A number of studies in distributive education reveal directly, or by inference, that occupational adjustment capabilities required of beginning workers in retailing are similar to those identified with office workers in the studies described above. For example, Zech (1970) found that employers of entry level workers in Lansing, Michigan retail stores considered the following characteristics to be important: spirit of cooperation, willingness to work, enthusiasm, interest in the product, sensitivity to customer needs, personal appearance, self-confidence, ability to cope with temporary failure and criticism, and being conscientious in performing menial tasks.

Additional research is available to show that most students have difficulty with their career development decisions and plans. Another general objective for related instruction which seems to be justifiable on the basis of research, is the remedial instruction required to bring some vocational students to a level of development where they effectively perform in the academic work situation.

Agreement on Broad Topics

There appears to be substantial agreement that certain broad topics are important for cooperative student-learners in almost any occupational field. A summary of these topics which merged after a review and synthesis of informal expressions during a national conference (University of Minnesota, 1969: 48) may be of interest to the reader at this point. The topics are:

Occupational Adjustment Capabilities
Learning how to learn a job
Interacting with co-workers, supervisors and employers

Participating in worker groups as a member and leader
Developing desirable work habits and attitudes
Making rational decisions about employment and personal economics
Preparation for the jobs ahead
Managing work and leisure time
Keeping abreast with current developments in the occupation
Others, drawn from the environments where the occupation is found

Career Development Capabilities

Assessing and analyzing one's own needs, interests, abilities and aspirations
Assessing and analyzing the potential opportunities and satisfactions of an occupational field
Predicting one's own chances of being successful and satisfied in the occupational field
Making decisions and plans to achieve goals and aspirations

There is little disagreement on the need to teach most of the broad topics listed above. A matter for concern, however, is the nature and quality of specific content within these broad areas. For example, "desirable work habits and attitudes" may be substantially different depending on the local culture, the kind of job, and many other factors. Knowing how to appropriately interact with co-workers in a business office might be quite different from interaction patterns in an equipment repair shop. Specific curriculum guides may be right on target in devoting attention to the topic of human relations, but the content might be faulty because they focus on human relationship problems quite unlike those with which the student will have to deal. Or, they may deal with appropriate problems, but consist only of reading and discussion, providing no enrichment activities or student involvement, with the result that there is no real change in student human relations behavior.

Needed Research and Development

What is most desperately needed is substantial research to determine specifically what various kinds of students need to learn as they work in various occupational settings. It is obvious, for example, that a group of students engaged in off-farm agricultural education cooperative programs in rural Montana might have clearly different needs in the area of work adjustment than a group of students in a diversified health occupations program located in Cleveland, Ohio. Research is needed to determine the work adjustment problems of the typical large city high school cooperative trainee, work adjustment problems in the allied health and medical occupations, work adjustment problems of students in rural areas and small communities, and studies relating to the work adjustment problems in off-farm agricultural enterprises.

A massive research effort, if it were organized in a systematic way, would include the full array of occupational clusters, the full array of employment situations and environments, and the full array of student groups. Such studies, if available, relating not only to work adjustment, career

development, technical knowledge and skill requirements, and other pertinent curriculum areas, would enable the coordinator to identify appropriate curriculum content materials for his own situation.

Another critical need is for research and development to apply the best that is known of educational technology to the learning content of the cooperative related class. For example, simulation and project activities could help students to visualize and develop skill in meeting the social and interpersonal demands of the work environment. We need learning activities that will insure the development of essential personal characteristics and attitudes. It is not enough for the student to be able to name the major causes of accidents on the job or to know five ways to detect employee dishonesty. He should be a genuine safety conscious and honest employee. The curriculum materials should provide the teacher-coordinator with content material, guidelines for instructional methods and procedures, teaching aids, and evaluation instruments, all previously pilot tested, validated, and packaged in usable form.

non-vocational content

To this point, there has been no discussion of two broad topic areas found to be popular in the documents which are considered in this review. One relates to personal adjustment problems such as study habits, narcotics and delinquency. The other is the broad area of consumer economics, including topics such as personal money management, insurance, taxes, and practical law. The apparent rationale for including this material which is obviously not directly related to the demands of the employment situation, is illustrated by the following:

> In trade and industrial education we are preparing you to earn money. Therefore, we feel compelled to offer you guidance in learning situations in the area of socioeconomics. Many of the subjects presented have been covered by other courses in high school, but it is believed that this review and its practical application as it is applied to today's society will be of much help. (Smith, 1965a)

If the reader accepts this rationale and chooses to include consumer economics, remedial instruction in basic skills, or other non-vocational subject matter in the related class, he should have no difficulty in finding materials which would be appropriate for adaptation to his situation. The same suggestion applies to the area of career development. Guidance people and psychologists in general have done so much work in the development of instructional materials relating to the broad objective of career development that it would be unfortunate if cooperative program coordinators were to attempt to develop their own materials without utilizing this available resource.

periodical literature review

Articles directly pertinent to the subject of this paper are so few in number that a full review and synthesis of research and literature in this area would not be justified. Those reviewed here will give the reader an idea of what the literature contains and will prepare the way for a more comprehensive investigation for anyone who might be interested in undertaking his own search.

Abrahamson, Jack. "Career Development in the Distributive Education Classroom." *Business Education Forum.* Vol. 16 (April, 1963).

The author suggests that in order to make career development the objective in a distributive education program, there must be a close relationship between a related class and the work station. In the related class there must be built a realistic image of work, a proper occupational perspective and the opportunity for self appraisal.

Bryan, Gerald O. "Give Students a Career Instead of a Job." *American Vocational Journal.* Vol. 39 (October, 1964), pp. 32-33.

The author describes how cooperative training can cause a student to regard his job as a dead end. The problem occurs because the businessman teaches specific duties but does not teach the interrelationships that exist between these duties and other jobs within the business. Techniques the coordinator may use to overcome this deficiency are case problems and individual help.

Cook, Helen E. "Vocational Guidance Materials: A Survey for Teachers." *American Vocational Journal.* Vol. 43, No. 9 (December, 1968), pp. 25-29.

This article lists government publications, collections of readings, 13 books, as well as various multi-media.

Cote, Theodore V. "The Counselor's Most Logical Helper." *American Vocational Journal.* Vol. 43, No. 9 (December, 1968), pp. 11-12, 55.

In this article the author makes the observation that "the vocational teacher can reach his students in ways that other teachers can only dream about."

Gyspers, Norman C., and Moore, Earl J. "Cooperative Work Experience as a Guidance Setting." *American Vocational Journal.* Vol. 43, No. 9 (December, 1968), p. 16, 61.

The essence of this article is that

> teacher-coordinators must be made to see the potential in cooperative work programs for helping students learn more than specific job skills as important as these may be. They need to recognize that a counselor on the cooperative education team can make a valuable contribution by helping stu-

dents see the impact that the psychological and social dimensions of their work activities in the cooperative program can have on their future careers.

Madson, John H. "Innovations in Distributive Education and Office Occupations in the Rural Community." *Business Education Forum.* Vol. 22, No. 2 (November, 1967), pp. 20-22.

This article suggests that especially in the rural setting the broad spectrum of student careers indicates the need for an individualized instruction program in vocational education. It is suggested that individualized instruction can offer variety and flexibility. Numerous ways in which this kind of instruction can be carried out are listed and described. This is an excellent article on the application of individualized instruction in the related class in a cooperative vocational program.

Nagle, Kathy. "Contract for Individual Projects." *Business Education Forum.* Volume 24, No. 7 (April, 1970), pp. 19-20.

The author describes the written contract as a system to challenge students to investigate their field of occupational interest. Many good ideas are given in a detailed contract system. Sources of material are given as well as suggestions about grading. Two types of contracts are illustrated along with comments about the outcomes for students when this method of instruction is used.

Patton, Lucille W. "Guidance Vehicle for DE." *American Vocational Journal.* Vol. 42, No. 7 (October, 1967), p. 36.

This article suggests that the preparatory curriculum give the student the opportunity to explore career possibilities. It is pointed out that the student should be provided with the means of assessing his abilities and of preparing himself for initial employment. The preparatory class and related projects are guidance oriented. The author recommends a youth club as a way to provide self-exploration experiences. Elements of good occupational guidance are listed.

Swanson, Gordon I., Nelson, Howard F., Meyer, Warren G. "Vocational Curriculum: A Conceptual Framework." *American Vocational Journal.* Vol. 44, No. 3 (March, 1969), pp. 22-24.

This article represents the current thinking of three of the top leaders and educators in vocational education, representing three diverse vocational fields. The article does what its title promises: it provides a set of basic concepts and a theoretical framework for vocational curriculum representing the current thinking of leaders in the field. Some of the authors' comments which are pertinent to the present discussion are:

> Two important considerations in planning vocational curriculum goals are the individual needs and motives and the occupational requisites of employment. The unique and dual purpose of the vocational curriculum is to produce satisfied, satisfactory workers, a condition which improves job productivity and occupational tenure.

The authors regraded as crucial eight imperatives, one of which was

> that vocational education provide experiences which will help the student identify his talents, relate those talents to the world of work, to identify an occupational interest, and to develop such talents as will widen his choices and improve the skills required for success. . . that the vocational curriculum satisfy the needs of learners in the vocational development as well as the needs of employers in competitively productive environments, with the ultimate goal of producing competent workers and citizens.

Trapnell, Gail. "A Cooperative Approach with Distributive Education Setting the Pace." *American Vocational Journal.* Vol. 40 (September, 1965), p. 31.

The author summarizes current philosophy among vocational educators regarding the broad goals for distributive education. She points out that regardless of a student's occupational objectives, there are four essential competencies necessary for his initial and continued employment. These four are: social competencies, basic skill competencies, technology competencies, and marketing competencies. The article describes a suggested core-curriculum.

Trimpe, Adrian. "The Industry Tour—A Motivating Force." *Business Education Forum.* Vol. 18, No. 6 (March, 1964), p. 22.

This article suggests that a tour of industry along with an early opportunity for work gives students almost immediate meaning in their programs of study. The tour gives a quick overview of the field of work in which they have expressed an interest, and it helps them determine whether or not their occupational choice is a good one.

For the coordinator who might decide to use the industry tour as a learning activity, this article should be very helpful.

Zimmerman, Bernice T. "Realistic and Remedial." *American Vocational Journal.* Vol. 41, No. 5 (May, 1966), p. 31.

The author points out that many students in the third and fourth years of high school cannot read, write, figure, or spell at reasonable levels of proficiency. The article discusses how students can acquire these tool skills as well as the social skills needed for distributive occupations. The author recommends a special course for the tenth grade. To motivate the student the course would be called "Education for Employment." Its content would be oriented so that students would see in every exercise a practical reason for learning.

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MISSION OF THE CENTER

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